PRODUCTION ADJUSTMENTS IN OHIO AGRICULTURE IN 1948
(Under assumed conditions)

Estimated Prepared by
The Ohio Agricultural Production Adjustment Committee

Department of Rural Economics
Mimeograph Bulletin No. 198

Ohio State University
and
Ohio Agricultural Experiment Station

Columbus, Ohio
September, 1947

TABLE OF CONTENTS

I. INTRODUCTION

Each year since 1942 the Ohio Agricultural Experiment Station and the College of Agriculture of Ohio State University have cooperated with the Bureau of Agricultural Economics, United States Department of Agriculture, in preparing a statement of suggestions for crop and livestock production in Ohio for the year ahead. The need for production adjustment analyses continues in peace as in war.

J. I. Falconer, Head of the Department of Rural Economics and Rural Sociology, Ohio State University and Ohio Agricultural Experiment Station was again designated as Chairman of the Ohio Production Adjustment Committee. The membership of this committee consists of representatives of the following organizations:

Ohio Agricultural Experiment Station
College of Agriculture, O.S.U.
Bureau of Agricultural Economics, U.S.D.A.
Soil Conservation Service
U.S.D.A. Agricultural Council for Ohio

The data was assembled and the report prepared by J. H. Sitterley of the Department of Rural Economics, Ohio State University.

The Committee has attempted to suggest what Ohio farmers should produce in 1948, considering prospective demand and requirements for 1948 production and long-time stability in the farming of the state. In the development of the various crop and livestock estimates, the Committee has drawn from historical data, past studies, and the best judgment available.

The "long-time objective" crop and livestock estimates presented in the report, Postwar Crop and Livestock Pattern for Ohio, December 1944, were used as a guide to the desired level of production in a stabilized agricultural situation for Ohio. The present report is developed primarily on a state basis since the detailed type of farming area analysis of 1944 is still considered to be reliable and contimues to meet the need for such data.

II. BASIC ASSUMPTIONS

As in past studies, the estimates presented in this report were arrived at as nearly as possible on a basis of a set of assumed conditions. The following basic assumptions were made:

(1) The need for and the demand for the major farm products of Ohio will remain at a high level.

(2) The prices for farm products will continue at about present levels due to a strong effective domestic demand and to the short feed crop of 1947.

(3) Cost of farm supplies will rise somewhat but production of the major products of Ohio farms will continue to be profitable.

(4) The supply of farm labor will be about the same in 1948 as in 1947. Farm wages will probably rise above 1947 levels.

(5) Farm machinery will be available at about the same rate as in 1947. But the supply of fertilizers will probably be somewhat greater. Certain seeds may continue to be short in supply. Most insecticides and fungicides will be available in adequate quantities.

(6) The 1947 crop prospects will create a tight feed situation for the next 12 months. However, with normal yields on 1948 suggested acreages of the feed grains, the supplies of livestock feed for 1948-49 in Ohio will be about normal.

(7) The remainder of 1947 and the 1948 planting, growing and harvesting seasons will be at least normal.

(8) It is highly essential that constant and increasing effort be given to checking soil deterioration where occuring and to the establishment of a soil restoration program through out the farming areas of the state.

The estimates or suggestions of this report, based upon these assumptions, are not intended to be goals for 1948. The estimates represent the best judgment as to the crop acreages and the livestock numbers that Ohio farmers should produce in 1947 under the assumed conditions. In setting goals, further consideration should be given to national and international needs. Thus, the goals for Ohio may be established either above or below the level of production suggested in this report.

III. CROP PRODUCTION IN 1948

Utilization of Cropland

The total acreage of cropland in Ohio increased slightly during the war period. However, the area in farms remained practically unchanged. The long-time objective provides for withdrawing about one-half million of the least productive acres from crop production.

TABLE 1 - Ohio: Estimated Utilization of Cropland in 1948, With Comparisons.

Use of Cropland	1946		1947		1948		Long-time Objective	
	Acreage	% of Total Cropland	Acreage	% of Total Cropland	Acreage	% of Total Cropland	Acreage	% of Total Cropland
Column	1	2	3	4	5	6	7	8
	1000 acres	%	1000 acres	%	1000 acres	%	1000 acres	%
Intertilled crops	4839	37	4568	35	4585	35	3703	30
Small grain crops	3276	25	3121	24	3470	26	3004	24
Sod crops	4220	32	4311	33	4440	34	5083	40
Tame hay & seed crops	2570	20	2611	20	2640	20	3035	24
Rotation pasture	1650	12	1700	13	1800	14	2048	16
Idle cropland	743	6	1078	8	583	5	754	6
Total cropland	13078	100	13078	100	13078	100	12544	100

The acreage of intertilled crops suggested for 1948 is 4,585,000 acres. This is about the same as that reported in 1947; but about 900,000 acres below the wartime peak reached in 1944. The proposed intertilled acreage for 1948 amounts to 35% of the total cropland area of the state as compared to 37% in 1946 and 43% in 1944.

The suggested downward adjustment in the intertilled acreage as well as in the proportion of the total cropland planted to such crops is in the direction recommended as a long-time objective for a balanced conservational type of farming. The suggested acreage for 1948 would still be 882,000 acres above the long-time objective. It is a definite advance toward a system of farming that will eventually rebuild the soils of the state and make for continued farm prosperity.

The relatively high small grain acreage is deemed desirable in order to obtain the needed grass seedings for expanding the sod crop acreage. For this reason an acreage almost a half million acres above the long-time objective is suggested for 1948.

A gradual rise in the cropland acreage utilized by the sod crops, including rotation pasture, has been occuring since 1945 when less than 30% of the cropland was in sod crops and rotation pasture (see Table 1). In 1946 32% of the cropland was in sod crops; in 1947 33%; and for 1948 34% is suggested. An increase of 100,000 acres of rotation pasture and 29,000 acres of cropland used for hay and seed crops over 1947 are suggested. These upward adjustments are in the direction indicated by the long-time objective cropping system for soil maintenance and rebuilding but, though fairly substantial for a single year, fall short of the objective itself.

During the past few years the acreage of idle cropland (including crop failure) has been at the low level of about 6% of the total cropland area. The stimulus of the war and virtually no abandonment or crop failure have been the prime factors in holding the idle acreage near the level suggested as a long-time objective. However, as a result of the adverse weather condition the acreage of idle cropland increased sharply in 1947. With a continuation of favorable prices and a normal weather situation in 1948 the idle acreage may be expected to again drop to or near the war time low mark.

Effects on Soil Productivity

The long-time trend in the productivity of the average soils of Ohio has thus far, but not inevitably, been downward. However, the yields of crops have been sustained and even raised by the interjection of numerous new cultural techniques and more efficient varieties. Had not the productivity of the soils been declining, these new techniques and plant strains would have produced far greater increases in yields.

Ohio agronomists have been calculating, by means of a system of productivity balances, the percentage changes that occur annually in the productive capacities of the soils of the state under specific cropping and management systems.[1] By applying this method of analysis to the entire rotated cropland acreage the productivity balances, shown in Table 2, are obtained.

Slight progress was made during the thirties toward a better balance (lower negative factor) but this was abruptly reversed by the stimulus to produce in order to meet wartime requirements for food. This acceleration in the rate of soil deterioration has been a source of concern to farmers and many have considered ways and means of easing the drain on their land. This concern began to be reflected in 1945. In that year the soybean acreage seeded was cut 223,000 acres below the peak reached in 1944. At the same time the small grain acreage in which meadow seedings are made

1/ "Our Heritage - The Soil", Ohio Agricultural Extension Service, Bulletin #175.

(the first step toward soil rebuilding) was increased 350,000 over 1944. Sod crops were also increased. In 1946 farmers again cut their soybean acreage by approximately one-fourth million and further increased the area in sod crops by a similar amount. These adjustments have been sufficient to produce an appreciable reduction in the rate at which the state's soils are being depleted (see Table 2). The crop pattern suggested by the Committee for 1948 continues this trend toward a balanced agriculture.

TABLE 2 - Ohio: Soil Productivity Balance, 1947 Estimated, With Comparisons

Year	Productivity Balance Factor	What's Happening to Productivity of Ohio Soils
	Percent	
1929	-.65	depleting
1935	-.61	"
1939	-.51	"
1942	-.61	"
1943	-.64	"
1944	-.76	"
1945	-.70	"
1946	-.63	"
1947 Expected	-.52	"
1948 Suggested	-.54	"
Long-time objective	Positive balance	Maintaining

The long-time objective is a crop and livestock pattern for the state that will maintain the productivity of the land. In the interests of national and individual farm security, progress toward this goal should be made as rapidly as post-war conditions permit. Farm management studies in Ohio show that farming is more profitable where the productivity of the land is maintained than where it is exploited.1/ The farming pattern of the state will still require major adjustments before the long-time objective - a positive productivity balance, is reached.

The suggested cropping pattern for 1948 with its relatively high acreages of wheat and oats is a temporary situation. The use of greater proportions of these crops is due to the fact that they serve as companion crops for seedings of the clovers and alfalfa which is the preliminary step. It is prerequisite to a further expansion of the acreage of sod crops - the basis for a soil maintaining and rebuilding program. In addition, the continuation and intensification in 1948 of the use of lime, fertilizer, and manure will do much to facilitate the attainment of the long-time objective. Even under the cropping pattern suggested for 1948, soil depletion will continue to be a major agricultural problem in Ohio.

1/ "The Relationship Between Soil Maintenance and Profitable Farming," Ohio Agricultural Experiment Station, Bulletin #604.

Acreage Adjustments - Major Crops

No drastic adjustments in the acreages of specific crops have been suggested for 1948 from those planted in 1947 - Form 1.

Corn: A slightly larger acreage of corn has been suggested for 1948 than the reduced acreage planted in the spring of 1947. The prospect for a strong demand for feed grains following the small crop expected in 1947 makes this desirable. In all probability, weather permitting, the acreage actually planted in 1948 will be considerably higher than the 3,520,000 acres suggested by the Committee.

Soybeans: The decline in the acreage of soybeans has been rapid since the record acreage of about 1,500,000 in 1944. The 1945 acreage dropped about 250,000 acres below the 1944 peak. This reduction was followed by another decline of 290,000 acres in 1946. In 1947 approximately the same acreage of soybeans was planted as in 1946. The acreage suggested for 1948 is about 50,000 acres below the 1947 plantings. This is still considerably above that recommended as a long-time objective.

Wheat: The acreage of wheat has been expanding during the past few years up to the 1946 seedings (fall of 1945) which were about 275,000 acres below the plantings for harvest in 1945. Unfavorable weather for maturing and harvesting corn and soybeans was an important factor in this decline. However, the additional acreage that farmers had intended to seed to wheat were planted to oats in the spring of 1946. Favorable sowing conditions and the strong demand situation prevailing in the fall of 1946 resulted in the wheat acreage climbing to 2,219,000, or to approximately the same level as seeded in the fall of 1944.

A wheat acreage of 2,200,000 is suggested for 1948 (seeding in fall of 1947). This is considerably above the long-time objective but is considered justifiable in the short run when all factors are taken into account. It provides ground cover over winter, a nurse crop for grass and legume seeding, and for many farmers it will provide a source of feed at a time (the summer of 1948) when feed supplies are very low. It also appears desirable in view of the short supply of bread grains throughout the world.

Favorable fall weather in recent years has been a factor influencing the acreage seeded to wheat. Winter killing has been negligent; less than 1% for 8 or 10 years. However, the Committee has assumed about a 5% abandonment in its calculations for 1948 in anticipation of the eventual return of greater winter killing and other more normal crop hazards.

Oats: Provided Ohio farmers are able to seed the 2,200,000 acres of wheat suggested for this fall, then about 1,300,000 acres of oats should be seeded in the spring of 1948, an increase of about 450,000 acres over the small 1947 planting growing out of the bad weather conditions. If a smaller wheat acreage is seeded this fall, then a greater acreage of oats should be planted in 1948. The oat acreage suggested for 1948 is considerably above the long-time objective.

Form 1

Ohio: Suggested use of farm land in 1948, with comparisons

Use of farm land	Acreage	Reported for 1946	Expected in 1947	Probable in 1948	Suggested for 1948	Long-time objective
Column	1	2	3	4	5	6
		1000 acres	1000 acres	1000 acres	1000 acres	1000 acres
Corn, all	P	3,671	3,451	3,700	3,520	2,704
Soybeans, grown alone	P	971	952	900	850	697
Soybeans for beans	H	903	875		785	675
Soybeans for hay	H	53	50		50	22
Tobacco, all	H	20	19		22	26
Burley	H	14	13		15	17
Other domestic	H	6	6		7	9
Sugar beets	P	29	25		45	45
Irish potatoes	P	55	47		65	126
Popcorn	P	15	5		5	
Truck crops for processing, total	P	74	69		74	85
Green peas	P	7	4		7	
Tomatoes	P	36	36		36	
Sweet corn	P	24	24		24	
Lima beans	P	1	1		2	
Cabbage (kraut)	P	3	1		2	
Cucumbers for pickles	P	3	3		3	
Truck crops for fresh market	H	14	10		14	20
Cabbage	H	4	2		2	
Cantaloups	H	2	1		2	
Carrots	H	2	1		2	
Celery	H	1	1		2	
Onions	H	1	1		1	
Tomatoes	H	4	4		5	
Adjustment for multiple use		10	10		10	
Total cropland used for intertilled crops 1/		4,839	4,568		4,585	3,703
Oats	P	1,410	846	1,400	1,300	1,074
Barley	P	18	16		30	36
Winter wheat	P	1,849	2,219	2,300	2,200	1,924
Oats for grain	H	1,383	795		1,260	1,050
Barley for grain	H	17	15		28	36
Grains cut green for hay	H	12	20		20	24
Rye for grain	H	17	26		25	49
Buckwheat	P	17	49		15	17
Adjustment for multiple use		35	35		100	96
Total cropland used for close-growing crops 1/		3,276	3,121		3,470	3,004

Form 1 (Continued)

Ohio: Suggested use of farm land in 1948, with comparisons

Use of farm land	Acreage	Reported for 1946	Expected in 1947	Probable in 1948	Suggested for 1948	Long-time objective
Column	1	2	3	4	5	6
		1000 acres	1000 acres	1000 acres	1000 acres	1000 acres
Hay, all tame--except soybean, cowpea, peanut and small grain hay	H	2,471	2,491		2,530	2,910
Hay, all tame	H	2,536	2,561		2,600	2,956
Seeds, hay and cover crop, all	H	424	320		410	435
Alfalfa	H	7	10		25	60
Red clover	H	319	230		300	250
Sweet clover	H	12	10		15	25
Alsike	H	25	10		20	40
Timothy	H	61	60		50	60
Rotation (cropland) pasture		1,650	1,700		1,800	2,048
Adjustment for multiple use		325	200		300	310
Total cropland used for sod crops 1/		4,220	4,311		4,440	5,083
Idle cropland		743	1,078		583	754
Total cropland 1/		13,078	13,078		13,078	12,544
Orchards, vineyards, and small fruits (adjusted)		10	10		10	
Orchards, vineyards, and small fruits, total		140	140		140	
Other plowable pasture		2,300	2,300		2,300	2,300
Open nonplowable pasture		2,500	2,500		2,500	2,500
Woodland pasture		1,400	1,400		1,000	350
Other land in farms		2,500	2,500		2,772	
Total land in farms		21,928	21,928		21,800	21,400
Winter cover crops, legumes	P	10	10		10	
Other pasture in farms	U	3,300	3,300		3,300	
New seedings after harvested nurse crops	U	1,650	1,650		1,650	
Hay and seed-crop aftermath	U	1,000	1,000		1,000	
Winter grains grazed (pre-harvest)	U	50	50		50	
Stalk and stubble fields	U	600	600		600	

1/ Total acres used for crops is less than the sum of the acreages of individual crops to the extent that two or more crops were, or will be, planted on or harvested from the same land during the year.

P = Planted acres
H = Harvested acres
U = Used

It is highly important that the combined acreage of oats and wheat be held at a high level for the next few years in order to provide nurse crop acreages essential in establishing greater acreages of the sod crops. In addition, oat yields and returns in recent years have made this crop attractive to the farmers of Ohio. Furthermore, it will provide an early source of feed which will be much needed in the summer of 1948.

Hay and pasture crops: Soil deterioration has been taking place at an accelerated rate since the start of the war, the harmful effects of which are becoming more evident each year. A definite effort should be put forth to continue and expand the upward trend in sod crop acreage that has been taking place since the low level was reached in 1944. The increases suggested for 1948 over 1947 in hay, seed crop and rotation pasture acreage are in keeping with this urgent need.

A rather substantial expansion, 100,000 acres, in the rotation pasture acreage is suggested for 1948, bringing the total up to 1,800,000 acres as compared to the long-time objective of almost 2,048,000 acres. This increased acreage of rotation pasture can be obtained by 1948 by holding over a greater acreage of old seedings and to a more limited extent the expansion of new seedings.

Hay and cover crop seed supplies are likely to continue short relative to requirements in 1948 and 1949. The harvesting of the maximum volume of seed should be encouraged in 1948. A high level of seed production, particularly the legumes, should be maintained until the long-time objective sod crop acreages are obtained.

Sugar beets: During the war and early post war years sugar beet acreage fell to less than half the average, 1937-41, pre-war acreage. Such a decline appears to have been due largely to labor shortages and to the relative greater profitableness of less risky alternative crops. In view of the current sugar situation the Committee suggested that 45,000 acres of sugar beets be planted in 1948 as compared to the 25,000 acres planted in 1947. In the ten-year period, 1933-42, the planted acreage of sugar beets in Ohio averaged 46,000 acres per year.

Potatoes: The downward trend in the acreage of potatoes has continued throughout the war period to the current crop year, declining from the 1937-41 average of 110,000 acres to 47,000 acres in 1947. Labor shortages, disease and other risk factors have caused the potato grower considerable difficulty. Furthermore, many farmers who formerly grew a few potatoes for their own use have discontinued this practice in recent years. The Committee feels that this downward trend should be stopped and reversed since Ohio is now a deficit potato producing area. 65,000 acres of potatoes are suggested for 1948 as compared to the long-time objective which provides for 126,000 acres. Greater availability and use of DDT, fertilizer, labor and specialized potato machinery may result in the expansion of Ohio's potato acreage in 1948.

Truck crops: Labor shortages and the profitableness of alternatives have kept the wartime acreages of the truck crops for processing only moderately higher than the 1933-42 average. Truck crop acreage for the fresh market has in recent years fallen substantially below the ten-year

pre-war average. Seventy-four thousand acres of the truck crops for processing are suggested for 1948, an increase of 5,000 acres from 1947 but 11,000 acres below the long-time objective. Fresh market truck crop acreage should be expanded from 10,000 acres in 1947 to 14,000 acres in 1948 in view of Ohio's growing population.

Probable Yields

The probable yields in 1948 were set at levels approximating rather closely the average yields obtained during the 1937-41 period except in the case of corn (see Form 2). The 1948 probable corn yield was set at 49 bushels per acre as compared to the 1937-41 average of 45 bushels. This upward adjustment was based on a more widespread use of hybrid corn particularly the newer higher yielding varieties. Also, the use of more fertilizer on corn and that a somewhat higher proportion of the 1948 corn crop will follow sod crops than in recent years. The appraisal of weather as a factor in the high yields of the past 7 or 8 years has been a difficult task. No doubt a return of somewhat "more normal" weather would result in significantly lower yields than have been harvested in recent years.

Soybean yields for 1948 were estimated at 20 bushels per acre as compared to a 19 bushel yield during the 1937-41 period. New higher yielding varieties along with greater farmer experience with this relatively "new" crop should raise the average yield at least one bushel per acre.

Tame hay yields in recent years have consistently exceeded the 1937-41 average of 1.38 tons per acre. A greater proportion of the tame hay acreage is now in clover or clover mixtures than was the case during the 1937-41 period. Also, the application of greater quantities of lime and fertilizer to the rotation during the past few years has had a favorable effect on hay yields. The tame hay yield probable in 1948 has been estimated at 1.45 tons per acre, compared to the long-time objective of 1.9 tons.

Total Production

If the estimated acreages and yields materialize as indicated by the July and August crop reports then the total production in 1947 of corn, small grain (including entire wheat crop) and soybeans will be about 20% below the 1935-44 average and 33% below 1946 (see Table 3). Probable production in 1948, based on suggested acreages (Form 1) and yields (Form 2), would be about 13% above the 1935-44 average and substantially above the 1947 production.

Form 2

Ohio: Probable crop yields per acre in 1947 with comparisons

Crop	Acreage	Unit	Base Period	Yield per acre: Average for base period	Yield per acre: Probable in 1948	Yield per acre: Long-time objective
Column	1	2	3	4	5	6
				Units		Units
Corn, all	P	Bu.	1937-41	44.9	49.0	54.0
Soybeans for beans	H	Bu.	1937-41	19.2	20.0	22.0
Burley tobacco	H	Lb.	1937-41	915.0	1150.0	1300.0
Other domestic tobacco	H	Lb.	1937-41	1003.0	1150.0	1400.0
Sugar beets	P	Ton	1937-41	7.5	8.0	12.0
Irish potatoes	P	Bu.	1937-41	104.4	125.0	125.0
Oats for grain	H	Bu.	1937-41	36.3	38.0	41.0
Barley for grain	H	Bu.	1937-41	26.3	26.0	28.0
Winter wheat	P	Bu.	1937-41	20.2	21.0	22.0
Rye for grain	H	Bu.	1937-41	15.8	16.0	16.0
Buckwheat	P	Bu.	1937-41	16.4	16.0	16.0
Peas	P	Ton	1937-41	0.6	0.6	0.8
Tomatoes	P	Ton	1937-41	6.0	6.0	7.0
Sweetcorn	P	Ton	1937-41	1.7	1.7	2.3
Cabbage (Krout)	P	Ton	1937-41	7.8	7.8	9.5
Hay, all tame	H	Ton	1937-41	1.38	1.45	1.9
Rotation (cropland) pasture		a.u.m.			2.3	3.5
Open permanent pasture and range in farms		a.u.m.			1.5	2.0
Woodland pasture in farms		a.u.m.			0.5	0.8
Other pasture in farms		a.u.m.			0.75	1.0

H = Harvested

P = Planted

TABLE 3 - Ohio: Suggested 1948 production of major crops, with comparisons

Crop	1935-44 Average		1946		1947 indicated July 1		1948 suggested 1/	
	Bushels (1000)	Tons (1000)	Bushels (1000)	Tons (1000)	Bushels (1000)	Tons (1000)	Bushels (1000)	Tons (1000)
Corn	155,800	4,364.1	178,409	4,997.5	111,738	3,129.9	172,480	4,831.4
Wheat	41,875	1,257.5	48,522	1,457.1	49,185	1,477.0	46,200	1,387.4
Oats	41,021	656.3	62,235	995.8	20,670	330.7	49,400	790.4
Barley	747	17.9	502	12.1	375	9.0	780	18.7
Rye	1,075	30.1	289	8.1	442	12.4	400	11.2
Buckwheat	283 2/	7.1	340	8.5	931	23.3	240	6.0
Soybeans	9,889 2/	297.0	16,254	488.1	13,712	411.8	15,700	471.5
TOTAL	-----	6,630.0	------	7,967.2	------	5,394.1	------	7,516.6
% of 1935-44 average	-----	100.0	------	120.1	------	81.3	------	113.3
Tame hay	-----	3,410.0	------	3,895.0	------	3,585.0	------	3,770.0
% of 1935-44 average	-----	100.0	------	114.2	------	105.1	------	110.5

1/ Based on suggested acreages, Form 1, and normal yields, Form 2.

2/ 1934-44 average

IV. LIVESTOCK NUMBERS AND PRODUCTION IN 1948-49

Estimated Livestock Numbers and Production

Horses: The horse population in the state continues to decline. The number of colts being raised are insufficient to maintain even one-half of the present number of horses. By January 1, 1948 the number will be below 200,000 head (Form 4). This continued downward trend has made and will continue for a few years more to make available feed and pasture for other types of livestock.

Milk cows. On January 1, 1945, there were 1,172,000 milk cows on farms in the state. This was the largest number to be recorded to date. Since then the number has dropped off some and on January 1, 1947 stood at 1,082,000 head. In view of the continued heavy demand for dairy products an attempt should be made to maintain present cow numbers and to increase them somewhat as soon as the feed supply situation improves. However, the likelihood of any appreciable increase during the remainder of 1947 and the early part of 1948 is highly improbable. The current shortage of feed grains and the lack of replacement stock makes any sizeable increase impossible. Heifer calves saved annually for replacement dropped from 287,000 in 1942 to 252,000 in 1945. In 1946 slightly more were saved than in the previous year. This decrease in calves saved is currently reflecting itself in the number of 1-2 year old heifers. On January 1, 1946, there were 24,000 less 1-2 year olds on Ohio farms than a year earlier and on January 1, 1947, 9,000 fewer than on January 1, 1946. Inasmuch as it is from this group that the replacements must come the only prospect for increasing milk cow numbers for the next 2 years is through a below normal culling program. With the current high prices for feed and labor and the good prices for cull animals for beef it is questionable if there will be any significant decrease in culling. In all probability dairy cow numbers will continue to decline for at least another year.

Beef cattle: Abundant roughage and pasture on many farms together with high prices of both feeder and finished cattle should be sufficient inducement to encourage farmers to maintain their present breeding herds.

The prospects for a corn crop, a considerable part of which may be soft due to late planting and the continued heavy demand for finished cattle should result in about the same number of cattle being placed on feed as the large number fed a year earlier. The high price of feeders will be the major factor in the way of an even larger increase in number put on feed in the event of a soft corn crop.

Poultry and eggs: The number of hens and pullets on farms is expected to be approximately 4 percent smaller January 1, 1948, than January 1, 1947. The narrow egg feed ratio and the tight feed situation throughout the hatching season have combined to bring the curtailment about.

Chickens raised in 1947 are also expected to be about 4 percent below last year as a result of the high cost of feed during the growing

season and the unattractiveness of poultry prices. The 1948 production is suggested at a level slightly below 1947 due to the critical feed grain situation. Both commercial broilers and turkey production are considerably below the 1946 level and may be expected to remain down until the feed situation improves.

Sheep: Sheep numbers have been on the down grade since 1943. In the opinion of the Production Adjustment Committee the downward adjustment has been carried too far on many farms from the standpoint of sound economy and some increase in number in 1948 is desirable. The long-time objective established for the Post-war Crop & Livestock Pattern for Ohio is two million head. In view of the favorable price for lambs and the small number available for replacement it is doubtful if an increase will occur.

In view of the short feed grain supply it seems desirable that some reduction should occur in the number of lambs put on feed in 1948. In all probability some reduction below the 1947 level will result, regardless of the feed situation, due to the small feeder lamb crop.

Hogs: With prospect for a short corn crop a substantial decrease in the number of sows bred for the spring and fall farrowing in 1948 is in prospect. The Production Adjustment Committee was of the opinion that farrowings should not exceed 325,000 spring litters and 375,000 fall litters in view of the current prospects for feed. Ohio farmers tend to adjust hog numbers and market weights to their own feed grain prospects and supply. In poor corn years fall farrowings are the first to reflect farmer adjustment to the situation. This is done by marketing bred sows. In 1934, with a crop of 106,000,000 bushels in prospect (August 1, 1947 corn prospect 112,000,000 bushels) farmers cut farrowings to 210,000 litters a drop of 130,000 below the previous fall. In the spring of 1935 270,000 litters were farrowed as compared to 314,000 the previous spring. Similar adjustments though less sharp occured with the poor corn crop of 1940 and 1944.

The 1948 fall farrowing of 375,000 litters and a 1949 spring farrowing of 425,000 was considered desirable by the Committee in view of the probable demand for meat and the likelihood of a better corn crop in 1948 than in 1947.

TABLE 4 - Ohio: Corn Production and the Number of Sows Farrowed, 1935-44 Average, With Comparisons

Period or year	Production 1000 Bu.	Sows Farrowed (1000 head) Spring	Fall	Total
1935-44 average	155,800	401	350	751
1937-41 average	156,342	386	341	727
1940	122,360	450	367	817
1941	160,974	392	360	752
1942	185,752	459	432	891
1943	174,042	551	488	1,039
1944	142,956	474	337	811
1945	176,913	360	364	724
1946	178,409	400	335	735
1947 indicated	111,738	428	350	778
1948 probable	181,300	340	375	715
1948 suggested	172,480	325	375	700
1949 suggested	----	425	370	795

Livestock Feed Requirements

With minor exceptions, the same feeding rates for the various types of livestock were assumed for 1947-48 and 1948-49 as were used in the 1946-47 feed year. On the basis of these feeding rates and livestock numbers and production (Form 3) 4,414,000 tons of grain were required in 1946-47. The suggested livestock program for the 1947-48 feed year will require about 4 million tons. This is about 10% below that required in 1946-47 and 23 below that fed in 1942-43. In addition to the grain 3,008,000 tons of hay and 12,502,000 animal unit-months of pasture will be required in 1947-48. This is approximately the same as in the preceding year.

Availability of Feed

On the basis of the August 1, 1947 acreage and production estimate, feed grain production plus carry-over and wheat fed on farms will make available for feeding in 1947-48 a total of 4,209,000 tons. This is 1,950,000 tons less than was available the previous year (see Form 3) and the shortest since the severe drought years of the 1930's. The 1944-45 feed supply was the shortest of the war period, due to the small carry-over and to the unfavorable 1944 growing season. The largest feed grain supply was in 1942-43 when the tonnage reached 6,493,000 due to the good crop season in 1942.

The 4,209,000 tons of feed grains estimated to be available for feeding in 1947-48 include 480,000 tons or 16,000,000 bushels of wheat that will be fed on farms where grown. This is approximately double that fed in 1946-47. The Committee was of the opinion that the feeding of wheat on farms where grown might readily exceed 16 million bushels if livestock and livestock product prices remained high and the price of corn remained approximately the same as wheat. They were also of the opinion that some of the 1947-48 feed grain shortage would be met by the heavy feeding of wheat and oats out of the 1948 crop in the period July to October 1948 before the 1948 corn crop becomes available. However, no addition was made to the estimated 1947-48 feed supply to take this latter into account.

The estimated 1948 cropping pattern for Ohio (see Form 1) will provide, if normal yields are attained, 5,834,700 tons of feed grain for use October 1, 1948-49 or 38 percent more than the estimated volume of feed available for the feed year beginning October 1, 1947.

Feed Balance Sheet

If the anticipated crop acreages and production materializes, livestock numbers are as suggested and feeding rates are as indicated, there will be a deficit of 59,400 tons of feed grains in the 1947-48 feed year. In 1946-47 the feed grain supply exceeded the livestock requirements and industrial use by about 1½ million tons. The closest balance between supply and requirements since the start of the war until 1947-48 existed during the feed year 1944-45 when the supply exceeded the demand by about 400,000 tons. With somewhat near normal weather both hay and pasture will be ample to meet needs in 1947-48 and 1948-49.

Form 3

Ohio - Supply of feeds available for feeding livestock and for other purposes, with comparisons
1948-49

Item	Year beginning October 1		
	1946-47	1947-48	1948-49
Column	1	2	3
	Tons 1000	Tons 1000	Tons 1000
Feed grains			
Corn, all			
Carry-over beginning of year	349.4	364.2	196.1
Production (inc. gr. in silage and fodder)	4,997.5	3,129.9	4,831.4
Total supply	5,346.9	3,494.1	5,027.4
Seed	16.8	16.8	16.8
Carry-over end of year	364.2	196.1	280.0
Net supply	4,965.9	3,281.2	4,730.7
Oats:			
Carry-over beginning of year	126.4	179.2	48.0
Production	995.8	330.7	790.4
Total supply	1,122.2	509.9	838.4
Seed	32.0	48.0	40.0
Carry-over end of year	179.2	48.0	80.0
Net supply	911.0	413.9	718.4
Barley:			
Carry-over beginning of year	2.6	1.2	1.0
Production	12.1	9.0	18.7
Total supply	14.7	10.7	19.7
Seed	1.0	1.4	1.0
Carry-over end of year	1.2	1.0	1.5
Net supply	12.5	7.8	17.2
Other grains:			
Wheat fed on farms where grown	262.3	480.5	360.4
Rye fed on farms where grown	2.9	5.6	4.2
Buckwheat fed on farms where grown	6.1	20.0	3.8
Total net supply of feed grains	6,160.7	4,209.0	5,834.7
Total needed for food and industrial use	250.0	250.0	300.0
Total available for feeding livestock and for outshipments	5,910.7	3,959.0	5,534.7
Total needed for feeding livestock	4,413.9	3,999.6	4,532.6
Total available for outshipments	1,496.8		1,002.1
Total inshipments needed		59.4	

Form 3 (continued)

Ohio - Supply of feeds available for feeding livestock and for other purposes, with comparisons
1948-49

Item	Year beginning October 1		
	1946-47	1947-48	1948-49
Column	1	2	3
	Tons 1000	Tons 1000	Tons 1000
Other farm-produced concentrates			
Soybeans fed	15	15	15
Skim milk fed (dry basis)	45	45	45
Hay			
Carry-over beginning of year	774	623	600
Tame hay production	3,895	3,585	3,770
Total supply	4,669	4,208	4,370
Carry-over end of year	623	600	600
Net supply	4,046	3,608	3,770
Total needed for feeding livestock	2,913	3,008	3,068
Available for other purposes	1,134	600	702
Inshipments needed	-----	-----	-----
Other roughages produced and fed			
Corn silage	1,080	1,100	1,100
Corn stover	1,500	1,500	1,500
Small grain straw	150	150	150
Grazing capacity of pastures and ranges (in animal unit months)	Grazing season		
	1947 a.u.m.	1948 a.u.m.	1949 a.u.m.
Rotation (cropland) pasture	3,910	4,140	4,200
Open permanent pasture and range in farms	7,275	7,275	7,275
Woodland pasture in farms	700	500	500
Other pasture in farms	2,475	2,475	2,500
Total carrying capacity	14,350	14,390	14,475
Total requirements for livestock	13,017	12,502	13,128

Form 4

Ohio: Suggested production of livestock and livestock products 1948, with comparisons

Items of livestock and livestock products	Unit	Reported for 1946	Reported for 1947	Probable in 1948	Suggested for 1948	Suggested for 1949
Column	1	2	3	4	5	6
		1000 units	1000 units	1000 units	1000 units	1000 units
On farms January 1:						
Horses, mules and colts	No.	265	224	190	190	175
Cattle and calves, all	No.	2,172	2,150	2,125	2,140	2,175
Cows kept for milk, 2 years +	No.	1,104	1,082	1,075	1,085	1,110
Other cows, 2 years +	No.	90	86	85	85	85
Sheep and lambs, all	No.	1,588	1,429	1,325	1,500	1,600
Ewes, 1 year +	No.	959	872	825	900	1,000
Hens and pullets	No.	19,855	19,668	18,500	19,000	20,000
During year:						
Sows farrowed, spring 1/	No.	400	428	340	325	425
Sows farrowed, fall 2/	No.	335	350	375	375	370
Chickens raised 3/	No.	30,491	29,500	29,000	29,000	31,000
Commercial broiler production	No.	4,630	4,000		3,000	4,000
Turkeys raised	No.	1,155	950	900	900	1,100
Milk cows, ave. during the year	No.	1,046	1,025		1,030	xxx
Milk produced	1000 Lbs.	5,230	5,125		5,150	xxx
Wool shorn	Lbs.	10,441	9,396		9,600	xxx
Eggs produced	Doz.	214,167	213,070		205,770	xxx
Cattle put on feed 4/	No.	140	135		135	xxx
Ave. gain on feeder cattle 5/	Lbs.	200	200		250	xxx
Sheep and lambs put on feed 4/	No.	340	300		325	xxx
Ave. gain on feeder sheep & lambs 5/	Lbs.	23	23		23	xxx
Ave. wt., hogs sold or butchered 5/	Lbs.					xxx
Net production of hogs 4/ cwt.	Lbs.	10,666	9,110		11,071	xxx

1/ December 1 (of previous year) to June 1.

2/ June 1 to December 1.

3/ Excluding commercial broilers.

4/ Twelve-month period beginning on October 1.

5/ Weight in pounds instead of 1,000 pounds.

TABLE 5: Ohio - Estimated Net Weight Production of Hogs

Year and pig crop	Sows Farrowing	Pigs per Litter	Pigs Saved	Death Loss Percent	Death Loss No. of head	Hogs Raised	Average Market Weight	Total weight Produced	Percentage of weight put on during feed year	Net Production
	1000 Head	Head	1000 Head	Percent	1000 Head	1000 Head	Pounds	1000 Pounds	Percent	1000 Pounds
1946-47										
Spring 1946	400	6.90	2,760	9.8	270	2,490	248	617,520	40	247,008
Fall 1946	335	6.94	2,325	9.8	228	2,097	240	503,280	90	452,952
Spring 1947	428	6.38	2,731	10.5	287	2,444	220	537,680	60	322,608
Fall 1947	350	6.70	2,345	10.5	246	2,099	210	440,790	10	44,079
Total	1,513		10,171		1,031	9,130		2,099,270		1,066,647
1947-48										
Spring 1947	428	6.38	2,731	10.5	287	2,444	220	537,680	40	215,072
Fall 1947	350	6.70	2,345	10.5	246	2,099	210	440,790	90	396,711
Spring 1948	325	6.56	2,132	10.5	224	1,908	220	495,000	50	247,500
Fall 1948	375	6.70	2,512	10.5	264	2,248	230	517,040	10	51,704
Total	1,478									910,987
1948-49										
Spring 1948	325	6.56	2,132	10.5	224	1,908	220	495,790	50	247,500
Fall 1948	375	6.70	2,512	10.5	264	2,248	230	517,040	90	465,336
Spring 1949	425	6.56	2,788	10.5	293	2,495	230	573,850	60	344,310
Fall 1949	370	6.70	2,479	10.5	260	2,219	225	499,275	10	49,927
Total	1,495									1,107,073

Form 5

Ohio - Estimated quantities of feeds needed for feeding livestock for the 12-month period beginning October 1, 1946

Class of livestock	Feed per animal, bird or cwt.						Total livestock and feed				
	Concentrates				Tame and Wild hay	Units of livestock	Concentrates			Hay	Pasture and Grazing (1000)
	Grains 1/	Seeds and skim milk	Commercial by-Products	Total			Grains 1/	Seeds and skim milk	Commercial by-products		
Column	1	2	3	4	5	6	7	8	9	10	11
	Pounds	Pounds	Pounds	Pounds	Pounds	1000 Units	1000 Tons	1000 Tons	1000 Tons	1000 Tons	A.U. Months
1. Horses, mules and colts	1300	--	5	1305	2500	224	145.6	---	0.6	280.0	1120
2. Milk cows	1530	15	305	1850	3200	1082	827.7	8.1	165.0	1731.2	6492
3. Beef cows	190	--	10	200	1500	86	8.2	---	0.4	64.5	516
4. Feeder cattle	1500	20	150	1670	1000	140	105.0	1.4	10.5	70.0	140
5. Other cattle and calves	680	30	80	790	1100	862	293.1	12.9	34.5	474.1	1724
6. Ewes, 1 year	75	--	3	78	450	872	32.7	---	1.3	196.2	872
7. Feeder sheep and lambs	105	--	20	125	200	340	17.9	---	3.4	34.0	34
8. Other sheep and lambs	40	--	--	40	375	260	5.2	---	---	48.8	260
9. Hogs, cwt. net production	410	10	35	455	---	10666	2186.5	53.3	186.7	----	1712
10. Hens and pullets	50	--	20	70	xxx	19668	491.7	---	196.7	----	59
11. Chickens raised	17	0.1	4	21	xxx	29500	250.8	1.5	59.0	----	30
12. Comm. broilers produced	5	--	4	9	xxx	4000	10.0	---	8.0	----	----
13. Turkeys raised	80	--	10	90	xxx	950	38.0	---	4.8	----	38
14. Other livestock	xxx	xxx	xxx	xxx	xxx	xxx	1.5	---	0.3	15.0	20
Total	xxx	xxx	xxx	xxx	xxx	xxx	4413.9	77.2	671.2	2913.8	13017

1/ Includes corn, oats, barley, rye, and wheat, fed from any source including harvested grain, corn silage, corn fodder, unthreshed grain, or commercial mixed feeds.

Form 5a

Ohio - Estimated quantities of feeds needed for feeding livestock for the 12-month period beginning October 1, 1947

Class of livestock	Feed per animal, bird or cwt.						Total livestock and feed				
	Concentrates				Tame and Wild hay	Units of livestock	Concentrates			Hay	Pasture and grazing (1000)
	Grains 1/	Seeds and skim milk	Commercial by-Products	Total			Grains 1/	Seeds and skim milk	Commercial by-Products		
Column	1	2	3	4	5	6	7	8	9	10	11
	Pounds	Pounds	Pounds	Pounds	Pounds	1000 Units	1000 Tons	1000 Tons	1000 Tons	1000 Tons	A.U. Months
1. Horses, mules and colts	1300	--	5	1305	2500	190	123.5	---	0.5	237.5	950
2. Milk cows	1530	15	305	1850	3200	1085	830.0	8.1	165.5	1736.0	6510
3. Beef cows	190	--	10	200	1500	85	8.1	---	0.4	63.8	510
4. Feeder cattle	1500	20	150	1670	1000	135	101.3	1.4	10.1	67.5	135
5. Other cattle and calves	580	30	80	690	1400	850	246.5	12.8	34.0	595.0	1700
6. Ewes, 1 year +	75	--	3	78	450	900	33.8	---	1.4	202.5	900
7. Feeder sheep and lambs	105	--	20	125	200	300	15.8	---	3.0	30.0	30
8. Other sheep and lambs	40	--	--	40	375	325	6.5	---	---	60.9	325
9. Hogs, cwt. net production	410	7	33	450	---	9110	1867.6	31.9	150.3	----	1300
10. Hens and pullets	50	--	20	70	xxx	19000	475.0	---	190.0	----	57
11. Chickens raised	17	0.1	4	21	xxx	29000	246.5	1.5	58.0	----	29
12. Comm. broilers produced	5	--	4	9	xxx	3000	7.5	---	13.5	----	---
13. Turkeys raised	80	--	10	90	xxx	900	36.0	---	4.5	----	36
14. Other livestock	xxx	xxx	xxx	xxx	xxx	xxx	1.5	---	0.3	15.0	20
Total	xxx	xxx	xxx	xxx	xxx	xxx	3999.6	55.7	631.5	3008.2	12502

1/ Includes corn, oats, barley, rye, and wheat, fed from any source including harvested grain, corn silage, corn fodder, unthreshed grain, or commercial mixed feeds.

Form 5b

Ohio - Estimated quantities of feeds needed for feeding livestock for the 12-month period beginning October 1, 1948

Class of livestock	Feed per animal, bird or cwt.					Total livestock and feed					
	Concentrates				Tame and Wild Hay	Units of Livestock	Concentrates			Hay	Pasture and Grazing (1000)
	Grains 1/	Seeds and skim milk	Commercial by-Products	Total			Grains 1/	Seeds and skim milk	Commercial by-Products		
Column	1	2	3	4	5	6	7	8	9	10	11
	Pounds	Pounds	Pounds	Pounds	Pounds	1000 Units	1000 Tons	1000 Tons	1000 Tons	1000 Tons	A.U. Months
1. Horses, mules and colts	1300	--	5	1305	2500	175	113.8	--	0.4	218.7	875
2. Milk cows	1530	15	305	1850	3200	1110	849.2	8.3	169.3	1776.0	6660
3. Beef cows	190	--	10	200	1500	85	8.1	--	0.4	63.8	510
4. Feeder cattle	1800	20	180	2000	1000	135	121.5	1.4	12.2	67.5	135
5. Other cattle and calves	680	30	80	790	1400	870	295.8	13.1	34.8	609.0	1740
6. Ewes, 1 year	75	--	3	78	450	1000	37.5	--	1.5	225.0	1000
7. Feeder sheep and lambs	105	--	20	125	200	325	17.1	--	3.3	32.5	32
8. Other sheep and lambs	40	--	--	40	375	325	6.5	--	--	60.9	325
9. Hogs, cwt. net production	410	7	33	450	--	11071	2269.6	38.7	182.7	----	1700
10. Hens and pullets	50	--	20	70	xxx	20000	500.0	--	200.0	----	60
11. Chickens raised	17	0.1	4	21	xxx	31000	263.5	1.6	62.0	----	31
12. Comm. broilers produced	5	--	4	9	xxx	4000	10.0	--	8.0	----	--
13. Turkeys raised	80	--	10	90	xxx	1000	40.0	--	5.0	----	40
14. Other livestock	xxx	xxx	xxx	xxx	xxx	xxx	1.5	--	0.3	15.0	20
Total	xxx	xxx	xxx	xxx	xxx	xxx	4532.6	63.1	679.6	3068.4	13128

1/ Includes corn, oats, barley, rye, and wheat, fed from any source including harvested grain, corn silage, corn fodder, unthreshed grain, or commercial mixed feeds.